

Case 3429**CHARILAIIDAE Dirsh, 1953 (Insecta, Orthoptera): proposed precedence over PAMPHAGODIDAE I. Bolivar, 1916**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the usage of the name CHARILAIIDAE Dirsh, 1953 for a group of African grasshoppers. The name is threatened by a little used senior name PAMPHAGODIDAE I. Bolivar, 1916. The name CHARILAIIDAE Dirsh, 1953 has become widely accepted and is in prevailing usage. It is proposed that the name CHARILAIIDAE Dirsh, 1953 be given precedence over PAMPHAGODIDAE I. Bolivar, 1916.

Keywords. Nomenclature; taxonomy; Orthoptera; CHARILAIIDAE; CHARILAINAE; PAMPHAGODIDAE; PAMPHAGODINAE; *Charilaus*; *Pamphagodes*; *Charilaus carinatus*; *Pamphagodes riffensis*; grasshoppers; Africa.

1. Stål (1875, p. 26) established the generic name *Charilaus* and the species name *Charilaus carinatus* Stål, 1875 (p. 26), the type species by monotypy. Bolivar (1878, p. 429) established the generic name *Pamphagodes* and a species *Pamphagodes riffensis* I. Bolivar, 1878 (p. 430), the type species by monotypy.

2. Bolivar (1916, p. 6) established 'Sectio PAMPHAGODES' to include the genera *Pamphagodes* I. Bolivar, 1878, *Charilaus* Stål, 1875 and *Cephalacris* I. Bolivar, 1916 (now a synonym of *Charilaus*).

3. Dirsh (1953, p. 161) described CHARILAINAE as a new subfamily based on *Charilaus* Stål, 1875 and included *Hemicharilaus* Dirsh, 1953 and *Pamphagodes*. Dirsh (1956, p. 241) raised the group to family rank as CHARILAIIDAE.

4. Johnston (1956, p. 106) used PAMPHAGODINAE for the same group in a catalogue with no mention of an author for the subfamily name. However, Johnston (1968, p. 42) used CHARILAIIDAE.

5. Kevan (1961, p. 99; 1982, p. 372) noted the priority of PAMPHAGODIDAE I. Bolivar, 1916 over CHARILAIIDAE Dirsh, 1953.

6. Vickery (1997, pp. 8, 18, 19) recognized PAMPHAGODIDAE and CHARILAIIDAE as separate families. No other author has accepted separation above the genus level.

7. The only other publication known to the authors that uses a family-group name based on *Pamphagodes* is Grimaldi and Engel (2005, p. 210). The mention is limited to a list contained within a single sentence.

8. CHARILAIIDAE Dirsh, 1953 has become widely accepted as the name for this group of grasshoppers (see Dirsh, 1954, p. 671; 1961, p. 369; 1965, p. 54; 1975, p. 54, Eades, 1962, pp. 1–2; 1963, p. 133; 2000, p. 195, Uvarov, 1966, p. 398, Descamps, 1966, p. 118, White, 1967, Johnston, 1968, p. 42, Sharov, 1968, pp. 106, 108, Johnsen, 1990, p. 31, Otte, 1994, p. 215 and Bisby et al., 2004, 2005, 2006, 2007).

9. Various databases available over the Internet use CHARILAIIDAE Dirsh, 1953. The Orthoptera Species File Online (<http://orthoptera.speciesfile.org>) has consistently used CHARILAIIDAE. Species 2000, ITIS (Integrated Taxonomic Information System) and the US National Center for Biotechnology Information (including GenBank) use CHARILAIIDAE based on information received from the Orthoptera Species File. The GBIF (Global Biodiversity Information Facility) uses CHARILAIIDAE based on information received from Species 2000. The Tree of Life (<http://tolweb.org/Acridoidea/13290>) also uses CHARILAIIDAE.

10. Usage of either PAMPHAGODIDAE or CHARILAIIDAE has consistently referred to a group of grasshoppers found in Africa and currently containing five species placed in four genera.

11. The senior author consulted the members of the Orthoptera Species File Committee established by the Orthopterists' Society. All five committee members who responded recommend that CHARILAIIDAE be given precedence in order to maintain the prevailing usage. The only usage of a family-group name based on *Pamphagodes* as a valid name in a revisionary taxonomic work is Bolivar (1916). There is one other usage in a catalogue and four incidental mentions in works of a different nature. In addition there is concern that the similarity between PAMPHAGODIDAE and PAMPHAGIDAE (a closely related family with 451 species) would cause unnecessary continuing confusion.

12. The International Commission for Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that the family-group name CHARILAIIDAE Dirsh, 1953 and other family-group names based on *Charilaus* Stål, 1875 are to be given precedence over PAMPHAGODIDAE I. Bolivar, 1916 and other family-group names based on *Pamphagodes* I. Bolivar, 1878 whenever their type genera are placed in the same family-group taxon;
- (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Charilaus* Stål, 1875 (gender: masculine), type species by monotypy *Charilaus carinatus* Stål, 1875;
 - (b) *Pamphagodes* I. Bolivar, 1878 (gender: masculine), type species by monotypy *Pamphagodes riffensis* I. Bolivar, 1878;
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *carinatus* Stål, 1875, as published in the binomen *Charilaus carinatus* (specific name of the type species of *Charilaus* Stål, 1875);
 - (b) *riffensis* I. Bolivar, 1878, as published in the binomen *Pamphagodes riffensis* (specific name of the type species of *Pamphagodes* I. Bolivar, 1878);
- (4) to place on the Official List of Family-Group Names in Zoology the following names:
 - (a) CHARILAIIDAE Dirsh, 1953 (type genus *Charilaus* Stål, 1875), with the endorsement that it is to be given priority over the name PAMPHAGODIDAE

- I. Bolivar, 1916 whenever their type genera are placed in the same family-group taxon;
- (b) CHARILAINAE Dirsh, 1953 (type genus *Charilaus* Stål, 1875);
- (c) PAMPHAGODIDAE I. Bolivar, 1916 (type genus *Pamphagodes* I. Bolivar, 1878), with the endorsement that it is not to be given priority over the name CHARILAIIDAE Dirsh, 1953 whenever their type genera are placed in the same family-group taxon;
- (d) PAMPHAGODINAE I. Bolivar, 1916 (type genus *Pamphagodes* I. Bolivar, 1878).

References

- Bisby, F.A., Froese, R., Ruggiero, M.A. & Wilson, K.L. (Eds.). 2004. Species 2000 & ITIS Catalogue of Life, Annual Checklist 2004: Indexing the world's known species. CD-ROM. Species 2000, Los Baños, Philippines.
- Bisby, F.A., Roskov, Y.R., Ruggiero, M.A., Orrell, T.M., Paglinawan, L.E., Brewer, P.W., Bailly, N. & van Hertum, J. (Eds.). 2007. Species 2000 & ITIS Catalogue of Life, 2007 Annual Checklist. CD-ROM, Reading, U.K.
- Bisby, F.A., Ruggiero, M.A., Roskov, Y.R., Cachueta-Palacio, M., Kimani, S.W., Kirk, P.M., Soulier-Perkins, A. & van Hertum, J. (Eds.). 2006. Species 2000 & ITIS Catalogue of Life, 2006 Annual Checklist. CD-ROM, Reading, U.K.
- Bisby, F.A., Ruggiero, M.A., Wilson, K.L., Cachueta-Palacio, M., Kimani, S.W., Roskov, Y.R., Soulier-Perkins, A. & van Hertum, J. (Eds.). 2005. Species 2000 & ITIS Catalogue of Life, 2005 Annual Checklist. CD-ROM, Reading, U.K.
- Bolivar, I. 1878. *Analecta Orthopterologica. Anales de la Sociedad Española de Historia Natural*, 7: 423–470.
- Bolivar, I. 1916. Orthoptera Fam. Acrididae. Subfam. Pamphaginae. In: Wytsman, P. (Ed.), *Genera Insectorum*, vol. 170, 40 pp. Martinus Nijhoff, La Haye.
- Descamps, M. 1966. *Pamphagodes riffensis* I. Bolivar, 1878, Charilaidae du Haut Atlas (Ort. Acridoidea). *Bulletin de la Société Entomologique de France*, 71: 113–122.
- Dirsh, V.M. 1953. Charilainae, a new subfamily of Acrididae (Orthoptera). *Annals and Magazine of Natural History, London*, (12)6: 161–173.
- Dirsh, V.M. 1954. Lathicerinae, a new subfamily of Acrididae (Orthoptera). *Annals and Magazine of Natural History, London*, (12)7: 670–672.
- Dirsh, V.M. 1956. The phallic complex in Acridoidea (Orthoptera) in relation to taxonomy. *Transactions of the Royal Entomological Society of London*, 108(7): 223–356.
- Dirsh, V.M. 1961. A preliminary revision of the families and subfamilies of Acridoidea (Orthoptera, Insecta). *Bulletin of the British Museum (Natural History) Entomology*, 10(9): 351–419.
- Dirsh, V.M. 1965. *African genera of Acridoidea*. 579 pp. Cambridge University Press, Cambridge.
- Dirsh, V.M. 1975. *Classification of the acridomorphoid insects*. 171 pp. E. W. Classey Ltd., Farringdon, Oxon.
- Eades, D.C. 1962. Phallic structures, relationships, and components of the Dericorythinae (Orthoptera, Acrididae). *Notulae Naturae*, 354: 1–9.
- Eades, D.C. 1963. Observations on *Charilaus* and Charilainae (Orthoptera: Pamphagidae). *Entomological News*, 74: 131–133.
- Eades, D.C. 2000. Evolutionary relationships of phallic structures of Acridomorpha (Orthoptera). *Journal of Orthoptera Research*, 9: 181–210.
- Grimaldi, D. & Engel, M.S. 2005. *Evolution of the Insects*. 755 pp. Cambridge University Press, Cambridge.
- Johnsen, P. 1990. Thericleidae, Charilaidae, Pamphagidae, Pyrgomorphidae, Pauliniidae, Acrididae: Hemiacridinae, Tropidopolinae, Coptacridinae, Calliptaminae, Euryphyminae, Eypreocnemidinae. In: *The Acridoidea of Botswana*, vol. 1. 129 pp. Zoological Laboratory, Aarhus University, Aarhus, Denmark.

- Johnston, H.B.** 1956. *Annotated catalogue of African grasshoppers*. 833 pp. Cambridge University Press, Cambridge.
- Johnston, H.B.** 1968. *Annotated catalogue of African grasshoppers*. Supplement. 448 pp. Cambridge University Press, Cambridge.
- Kevan, D.K.M.** 1961. Current tendencies to increase the number of higher taxonomic units among insects. *Systematic Zoology*, **10**(2): 92–103.
- Kevan, D.K.M.** 1982. Orthoptera in: Parker, M.A. (Ed.), *Synopsis and Classification of Living Organisms*. 1232 pp. McGraw-Hill Book Company, New York.
- Otte, D.** 1994. Grasshoppers [Acridomorpha] B. Pamphagoidea. *Orthoptera Species File*, **3**: 1–241.
- Sharov, A.G.** 1968. Filogniya orthopteroidnykh nasekomykh (in Russian). *Trudy Paleontologicheskogo Instituta, Akademiia Nauk SSSR* [English translation, 1971. Phylogeny of the Orthopteroidea, *Transactions of the Paleontological Institute, Academy of Sciences of the USSR*], **118**: 1–251.
- Stål, C.** 1875. Observations orthoptérologiques. *Bihang till Kongliga Svenska Vetenskaps-Akademiens Handlingar*, **3**(14): 1–43.
- Uvarov, B.** 1966. *Grasshoppers and locusts. A handbook of general acridology*, vol. 1. 481 pp. Cambridge University Press, Cambridge.
- Vickery, V.R.** 1997. Classification of the Orthoptera (*sensu stricto*) or Caelifera. Pp. 5–40 in Gangwere, S.K., Muralirangan, M.C. and Muralirangan, M. *The Bionomics of Grasshoppers, Katydid and Their Kin*. CAB International, New York.
- White, M.J.D.** 1967. Karyotypes of some members of the grasshopper families Lentulidae and Charilaidae. *Cytologia*, **32**: 184–189.

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